



**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Patent Application of

HUTCHISON

Serial No. 09/848,782

Filed: May 2, 2001

**RECEIVED**

OCT 28 2003

TC 1700

Atty. Ref.: 11-902

Group: 1771

Examiner: Juska

For: TUFTED COVERING FOR FLOORS AND/OR WALLS

\* \* \* \* \*

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

**EVIDENTIARY DECLARATION OF TODD SHAIL**

I, TODD SHAIL, declare and state as follows:

1. I received a Bachelor of Science degree in Textile Management conferred by North Carolina State University in 1992. I also received a Masters of Science degree in Textile Technology and Management, conferred by North Carolina State University in 1994. I have been employed from 1994 to the present by various divisions of Burlington Industries, Inc., the assignee of the present application, including Burlington Global Denim, Lees Carpets, Burlington Sportswear and Knitted Fabrics Division. Particularly, between September 1994 and November 1995, I served as supervisor in several textile manufacturing areas, including textile dyeing and finishing and had responsibilities for safety, quality, productivity and cost control. Between 1995 and 1999, I served in various managerial roles in several Burlington textile plants and had responsibilities relating to textile finishing, dyeing and knitting. From April 1999 to June 2000, I was employed by Lees Carpets as one of two managers in a department which processed,

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on average, 400,000 square yards of commercial carpet per week. From June 2000 to May 2002, I served as a Production Manager for dyeing, finishing and inspection in a facility in Mississippi producing denim textiles. From May 2002 to the present, I have served as the Director of Research and Development for Lees Carpet and have responsibility for technology enhancement, including chemical systems, yarn, manufacturing equipment and processes, all related to carpeting.

2. I have reviewed and am thoroughly familiar with the above-identified U.S. patent application, the claims pending per the Amendment filed May 14, 2003, the official Action of the U.S. Patent and Trademark Office dated July 29, 2003 and the applied reference to Roth, U.S. Patent No. 4,563,378. I understand that the Examiner has stated that Roth depicts in Figures 3-5 part of a primary backing which is not tufted and wherein warp and weft yarns of the primary backing are exposed as part of the carpet wear surface. I further understand the Examiner has stated that Roth depicts, particularly in Figure 3, areas of the primary backing which are devoid of tufts and which are exposed to the surface.

3. First, Figure 3 of Roth depicts the wear side and backstitches of a carpet allegedly formed by a tufting machine. The Roth drawing Figures 3-5, however, are not technically accurate depictions of a tufted carpet. In fact, the scrim 20 of Roth cannot be tufted to achieve the carpet configuration illustrated in Figures 3-5. Particularly, and for reference, the weft ends of the scrim 20 are labeled 19 in Figure 3 and extend vertically. The warp ends (unnumbered) extend horizontally in Figure 3. In tufting machines, needles carried by a needle bar reciprocate in a vertical direction. Specifically, the needles carrying the warp ends move downwardly into the substrate or

scrim, forming or passing through a hole in the scrim. At the end of the downward stroke, the needles move upwardly through the same hole, leaving loops of warp ends below the scrim. This is very schematically illustrated in Roth (Figure 5, middle drawing Figure on the right) although incorrectly as noted below. With the scrim moving continuously in the warp direction, the needles then carry the warp ends over one or more of the weft ends to form backstitches. The needle bar reciprocates again, inserting the needles carrying the warp ends into holes in the scrim and withdrawing the warp ends from the same holes. The continuous movement of the scrim requires the warp ends to form additional backstitches over the next one or more of the weft ends. The process continues.

4. The backstitches in Roth are shown by the shaded areas in Figure 3. Gaps are illustrated in Figure 3 between the backstitches in the warp direction, apparently exposing portions of the warp ends as well as the weft ends. However, gaps, when stitching warp ends, cannot be formed by a tufting machine since the reciprocating movement of the needle through the scrim, together with the movement of the scrim, require a backstitch to be formed between each needle penetration of the scrim. The stitch lines in the warp direction formed by the warp ends must be continuous and must cover the entire surface of the scrim. That is, backstitches formed by tufting machines extend between adjacent needle penetration holes and thus form a continuous stitch line in the warp direction. The gaps depicted in Figure 3 of Roth in the warp direction form a non-continuous stitch line which cannot be formed by a tufting machine as Roth states. Consequently, the Roth drawing Figure 3 is an inaccurate depiction of a tufted scrim since a non-continuous stitch line in the warp direction is not possible using tufting

machines. Accordingly, the gaps depicted in Figure 3 of Roth along the warp ends cannot exist when the Roth carpet is tufted as Roth states.

5. Further, Roth states that the primary backing consists of twenty-four warp ends per inch and eleven filling ends per inch (see col. 4, ll. 43-45). Drawing Figure 3 of Roth discloses ten warp ends and nine filling ends in an area as measured on drawing Figure 3 of 16.5 square inches. With the preferred backing consisting of twenty-four warp ends per inch and eleven filling ends per inch in Roth, Figure 3 depicts a true carpet area of about 0.38 square inches. This means that the drawing Figure 3 of Roth is an enlargement, i.e., a magnification, of about forty-three (43) times the actual carpet of the preferred embodiment. Because of the technical inaccuracy of drawing Figure 3 as noted above with respect to the non-continuous stitch lines and gaps and because of the forty-three times magnification of Figure 3, a carpet formed by tufting scrim 20 of Roth would not have any exposed primary backing.

6. Further, to calculate the coverage of the warp ends, four factors must be known. Those four factors are yarn size, stitch rate, needle bar stagger and machine gauge. Roth provides only the stitch rate. Consequently, it is not possible to draw a technically correct diagram which would provide an indication of the coverage of the warp ends over the scrim from the information given in Roth.

7. Further, and referring to Figure 5 and the depiction in the middle right of the tufting machine, once again the Roth drawing is inaccurate. Roth states that there is a knife edge 26 which cuts the loops (col. 5, ll. 11-14). However, in that drawing figure, the loops trailing the scrim on the right side are illustrated as not cut. Further, at col. 5,

1. 12, the knife edge is stated to cut the vertical loops 27 which, in Figure 4, are shown as uncut backstitches 27. This further indicates the inaccuracy of the Roth drawings.

8. To summarize, the gaps shown in Figure 3 of Roth along the warp ends between stitches (needle penetrations) are not capable of being created by a tufting machine. The reciprocating action of the needle in each adjacent hole along each stitch line in the warp direction and the continuous movement of the scrim requires each backstitch (warp end) to extend in the warp direction from each hole to the next hole in the scrim overlying the one or more weft ends between those adjacent holes. The gaps illustrated in Roth simply cannot be formed by stitching warp ends using a tufting machine. Consequently, Roth does not teach me how discrete areas of a primary backing may be formed of tufts and void of tufts to respectively provide discrete wear surface portions of a carpet or place me in possession of this aspect of the invention as claimed.

I declare further that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Date: 10/17/03

  
TODD SHAIL

NIXON &amp; VANDERHYE PC4 Fax:703-816-4100

Oct 21 2003 10:35 P.02

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Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

**EVIDENTIARY DECLARATION OF GENE DUFF**

I, GENE DUFF, declare and state as follows:

1. I am currently a consultant to the Lees Carpet Division of Burlington Industries, Inc. and was previously employed as Director of Fabric Development for the Lees Carpet Division of Burlington Industries, Inc. from 1985 through May, 2003. Between 1974 and 1985, I was Director for Tufting Research and Development for the Lees Carpet Division. From my initial employment in 1957 with Burlington Industries, Inc. to 1974, I was involved in tufting and finishing product research and development.
2. I received an Associate Degree in Accounting from National Business College, Roanoke, Virginia in 1961 and an Associate Degree in Textile Engineering Technology in 1966.
3. I have reviewed and am fully familiar with the claims pending per the Amendment filed May 14, 2003 in the above-identified patent application and the reference to Roth, U.S. Patent No. 4,563,378. I understand that the Examiner has

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4. I have reviewed the Declaration of Mr. Todd Shail, executed by Mr. Todd Shail on October 17, 2003.

5. I confirm and am in complete agreement with the statements set forth in ¶¶ 3-8 of Mr. Shail's Declaration.

I declare further that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Date: 10/22/03

Gene C. Duff  
GENE DUFF



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TODD SHAIL